IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(Currently Amended) A camera module comprising:

a housing containing a solid-state image sensor with a radiation-sensitive surface, ~~and an~~ a first optical element located above the solid-state sensor and the housing forming a shield against laterally scattered radiation to protect the radiation-sensitive surface, a second optical element located between the first optical element and the solid-state sensor, and a spacer between the first optical element and the second optical element, the second optical element having a lens located above the radiation-sensitive surface, wherein the spacer is located adjacent the lens for supporting the first optical element; and

the housing includes a disk-shaped body with a primary

radiation-opaque area and a secondary radiation-transparent area located within the primary area, the secondary area is located above the radiation-sensitive surface of the sensor and wherein a surface close to the sensor is smaller than a surface remote from the sensor; and

the first optical element includes at least one plate of transparent material having two sides, each side covered with a layer of radiation-opaque material (ROM), and an aperture is defined in the at least one plate; and

wherein the aperture in the ROM layer deposited on a side of the at least one plate close to the sensor has a smaller surface area than the aperture in the ROM layer on a side of the at least one plate remote from the ~~sensor and~~ sensor, and

wherein the primary radiation-opaque area and the secondary radiation-transparent ~~areas~~ area are defined by portions of the plate of transparent material sandwiched between the opaque layers and the apertures therein, respectively.

2. (Currently Amended) ~~A~~ The camera module as claimed in claim

1, ~~characterized in that the~~ wherein the first optical element includes a single transparent plate whose upper and lower surfaces are both covered with a radiation-opaque layer in which circular and concentric apertures are provided.

Claim 3 (Canceled)

4. (Currently Amended) ~~A~~ The camera module as claimed in claim 1, ~~characterized in that~~ wherein the transparent material includes a glass or a synthetic material.

5. (Currently Amended) ~~A~~ The camera module as claimed in claim 1, ~~characterized in that~~ wherein the opaque layer is made of blackened metal.

Claim 6 (Canceled)

7. (Previously Presented) A mobile telephone or personal digital assistant provided with a camera module as claimed in claim

1.

8. (Currently Amended) A method for manufacturing a camera ~~module, the camera~~ module comprising the acts of:

forming a housing containing a solid-state image sensor with a radiation-sensitive ~~surface, and~~ surface;

~~an~~ forming a first optical element located above the solid-state image sensor; ~~and the housing forming a shield against laterally scattered radiation to protect the radiation-sensitive surface; and~~

~~the housing includes~~ forming a disk-shaped body with a primary radiation-opaque area and a secondary radiation-transparent area located within the primary area, wherein the secondary area is located above the radiation-sensitive surface of the sensor and wherein a surface close to the sensor is smaller than a surface remote from the sensor; ~~and~~

forming a second optical element located between the first optical element and the solid-state image sensor; and

forming a spacer between the first optical element and the

second optical element, the second optical element having a lens located above the radiation-sensitive surface, wherein the spacer is located adjacent the lens for supporting the first optical element;

wherein the first optical element includes at least one plate of transparent material having two sides, each side covered with a layer of radiation-opaque material (ROM), and an aperture is defined in the at least one plate; and

wherein the aperture in the ROM layer deposited on a side of the at least one plate close to the sensor has a smaller surface area than the aperture in the ROM layer on a side of the at least one plate remote from the ~~sensor and~~ sensor, and

wherein the primary radiation-opaque areas and the secondary radiation-transparent ~~areas~~ area are defined by portions of the plate of transparent material sandwiched between the radiation opaque layers and the apertures therein, respectively.

9. (Currently Amended) ~~A~~ The method as claimed in claim 8, ~~characterized in that~~ wherein there is a plurality of optical

elements and, if required,

a plurality of further components such as a lens are formed in a first stack of disk-shaped bodies, and

a plurality of solid-state image sensors are formed in a second stack of disk-shaped bodies, in which the electrical connections of the solid-state image sensors extend to the lower side of the second ~~stack and~~ stack, and

part of the first stack is deposited on each image sensor, after which individual camera modules are obtained by separating the second stack of image sensors by means of a dicing operation.

10. (Currently Amended) ~~A~~ The method as claimed in claim 9, ~~characterized in that~~ wherein the second stack is separated into individual elements each with its own image sensor by means of a first dicing operation, said elements are deposited on the first stack using a pick-and-place machine prior to the separation of the first stack by means of a second dicing operation.

11. (Currently Amended) ~~A~~ The method as claimed in claim 9,

~~characterized in that~~ wherein the first stack is aligned with and mounted on the second stack and the first optical elements, any additional optical components and the image sensors, are separated via a single dicing operation.

12.(Currently Amended) A method ~~as claimed in claim 9, characterized in that~~ for manufacturing a camera module comprising the acts of:

forming a stack containing individual image sensors, wherein at least one sensor of the image sensors has a radiation-sensitive surface;

forming an optical element located above the at least one sensor;

forming a disk-shaped body with a primary radiation-opaque area and a secondary radiation-transparent area located within the primary area, wherein the secondary area is located above the radiation-sensitive surface of the at least one sensor, wherein a surface close to the at least one sensor is smaller than a surface remote from the at least one sensor, and wherein the primary

radiation-opaque area and the secondary radiation-transparent area are defined by portions of the plate of transparent material sandwiched between the radiation opaque layers and the apertures therein, respectively;

~~the second stack is deposited~~ depositing the stack on a film during ~~the~~ a dicing ~~operation and,~~ operation;

after dicing up to the film, ~~the~~ filling grooves between the individual image sensors ~~formed by this operation and the grooves that are defined, the~~ and grooves located between individual optical elements ~~and any further optical components are filled~~ with an electrically insulating synthetic ~~material, after which this~~ material; and

dicing the synthetic material ~~is diced~~ with a dicing saw having a smaller saw cut than otherwise needed for cutting the through the grooves~~and the individual camera modules covered with an electrically insulating shell are removed from the film~~.